ENFORCER®

DR-1 Series

H.264 Network DVR

Quick Setup Guide*

	No. of Channels	Pictures/ Second	HDD Capacity
DR-104Q	4	120	N/A
DR-108Q	8	240	N/A
DR-116Q	16	480	N/A
DR-104-500Q	4	120	500GB
DR-108-500Q	8	240	500GB
DR-116-1.0TQ	16	480	1TB

- Easy recording and setup.
- Remote LAN and Web viewing.
- iPhone/Smartphone compatible.
- Per-event recording and search.

- BNC, HDMI, and VGA outputs.
- Programmable motion detection.
- Multi-channel audio recording.
- Free DDNS server.

*For more installation tips, consult the User's Manual on the CMS Software CD included with this product, or visit www.seco-larm.com.

Scan with your smartphone for DVR Support.
Or visit us at www.seco-larm.com/DVRsupport.htm

Spanish Quick Setup Guide is also available. Please visit http://www.seco-larm.com/DVRsSp_C.htm
Guía de arreglo en español está también disponible. Por favor visite http://www.seco-larm.com/DVRsSp_C.htm

SLI SECO-LARM

FC ℃ RoHS

Note: Products with model numbers that end with "Q" or that have a round green "Q" sticker are RoHS compliant.

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Using the Mouse

OSD Location	Desired Action	Mouse Control
Main screen	Show channel fullscreen	Left click channel image
	Show all channels	Left click fullscreen image
	Open main screen menu	Right click
System menu	Select menu item / setting	Left click
	Cancel without saving (when item is selected)	Right click
	Go back / exit (when navigating a menu)	Right click
	Increase setting	Scroll wheel up or click up arrow near indicated value
	Decrease setting	Scroll wheel down or click down arrow near indicated value
Playback	Show channel fullscreen	Left click channel image
	Show all channels	Use main screen menu
	Scan forward one frame[2]	Scroll wheel up[1]
	Scan backward one frame[2]	Scroll wheel down[1]
	Increase playback speed[3]	Scroll wheel up[1]
	Decrease playback speed[3]	Scroll wheel down[1]

[1]If scroll wheel is not available, please use the up/down arrows on the device front panel or remote control.
[2]Playback must be paused to use this function.
[3]For details see the Playback section on page 11 of this guide.

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Front Panel:

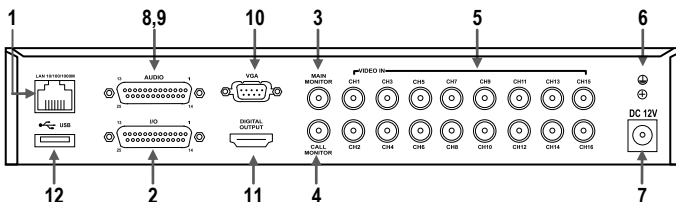|	Front panel feature descriptions:	
1	Channel selection buttons	1. Press any button to view the corresponding channel in full mode on the main screen. Press MODE to return to other views. 2. Channel selection keys are used as a keypad to input numbers when entering passwords, etc. 3. In PTZ Mode, press Channel 1 to enter the Set/Go preset menu. Press Channel 2 to show or hide the PTZ settings menu.
2	Alarm LED	ON during any alarm event.
3	Network LED	ON when the Ethernet connection is transmitting.
4	Record LED	ON when recording is in progress.
5	IR sensor	Receives commands from the IR Remote.
6	Escape	Cancels the current operation or returns to the previous menu or screen.
7	Arrow buttons	1. Moves the viewable screen area when using zoom. 2. Moves the cursor when navigating menus.
8	Zoom/Enter	1. Toggles 2x Zoom ON/OFF for present/last channel when viewing the main screen. 2. Chooses the selected menu or confirms the present setting.
9	Menu/Tele	1. Enters the system menu. 2. PTZ function: Zooms in to enlarge a certain area.
10	Search/Wide	1. Opens the search menu to search for recorded video by date/time or event. 2. PTZ function: Zooms out to show a larger area.
11	Mode/Iris Open	1. Selects full-screen or multiple-window display. 2. PTZ Function: Opens camera iris.
12	Play/Stop / Iris Close	1. Plays or stops the video when viewing recorded material. 2. PTZ Function: Closes camera iris.
13	Freeze/Focus (-)	1. Freezes the current view when viewing the main screen. 2. PTZ function: Changes focus to a farther point.
14	Seq/Focus (+)	1. Activates the Sequence feature when viewing the main screen. 2. PTZ function: Changes focus to a closer point.
15	Dome	Enters PTZ control mode.
16	Copy	Marks start and end time when exporting video.
17	Call	Enters Call Monitor Control mode.
18	USB Port	Provides connection point for USB flash drive, mouse, or other USB device.

Rear Panel:

DR-104Q and DR-104-500Q:
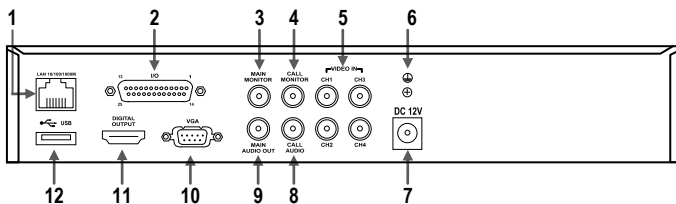
**DR-108Q and DR-108-500Q:**
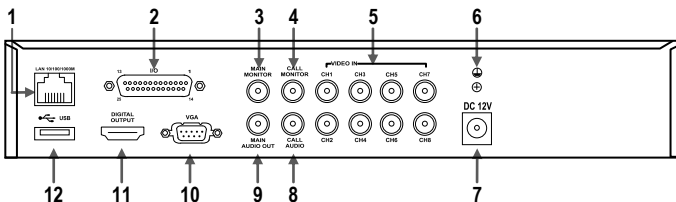
DR-116Q and DR-116-1.0TQ:

	Rear panel feature descriptions:	
1	LAN 10/100/1000M	Use a Cat5e/6 cable to connect the DVR to a Local Area Network for remote access.
2	Alarm I/O, RS-485, and Audio	Allows the DVR to connect to alarm I/O and other RS-485 devices. **See Pin Connection chart on pg. 11 for more details.**
3	Main Monitor	Allows the DVR to output a video signal to a security monitor using a coaxial cable.
4	Call Monitor	Allows the DVR to output a video signal to a secondary monitor using a coaxial cable.
5	Video Input	Provides a connection point for video streams from cameras using coaxial cables.
6	Ground Screw	Connect to earth ground to prevent electrical damage to DVR.
7	Power Jack	Connect a 12VDC power source. (5 Amp)
8	Call Audio	Allows the DVR to output an audio signal to a secondary audio device.
9	Main Audio	Allows the DVR to output an audio signal to an audio device.
10	VGA Output	Allows the DVR to output to a computer monitor or other VGA device.
11	HDMI Output	Allows the DVR to output to a high definition television or other HDMI device.
12	USB Port	Provides connection point for USB flash drive, mouse, or other USB device.

Getting Started:

Connections:
1. Connect cameras to the BNC channel inputs on the rear of the device.
2. Connect a VGA-capable display to the VGA port on the rear of the device.
3. If connection to a Call Monitor is desired, connect via the BNC port marked Call Monitor Out on the rear of the device.
4. If network access to the DVR is desired, connect the DVR to a Local Area Network (LAN) using a Cat5e/6 cable with an RJ-45 connector.
5. If using a mouse to operate the DVR On-Screen Display, connect a standard USB mouse via the USB port on the front or rear of the device.
6. When all connections have been made, plug the included power adapter into a 110~240 VAC power outlet. Connect the adapter to the power input on the rear of the device.
    Note: To avoid possibility of data loss, never unplug the adapter before properly shutting down the device. For more information see the section **Shutting Down the DVR** on page 11.
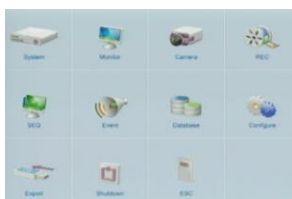
System Menu

Initial System Setup:
1. To enter the system menu, press MENU on the device's front panel or remote control, or if using a mouse, right click when viewing the main screen and select the "MENU".
2. Enter the administrator username and password.
    IMPORTANT: FOR SECURITY PURPOSES, CHANGE THE PASSWORD IMMEDIATELY AFTER ENTERING THE MENU FOR THE FIRST TIME. FAILURE TO DO SO MAY SERIOUSLY COMPROMISE THE SECURITY OF THE SYSTEM.
    Note: Default username: **admin**   Default password: **1234**.
    Note: Username is case sensitive.
3. To change the system password:
    a. Enter the system menu following steps 1 and 2 above.
    b. Select **SYSTEM** using the left/right buttons and press ENTER, or use a mouse to left click the icon.
    c. Select **User Management**.
    d. For the first account, "admin", select Edit in the column marked PWD. Enter a new 4~8 digit password. Note: admin account ID cannot be changed. Choose a password that is memorable but not easily guessed by others.
    e. For the second account, "user", select Edit in the column marked ID. Enter a new name, if desired. When finished select OK. Next, select Edit in the column marked PWD. Enter a new 4~8 digit password as described in part d. above.
    f. By default there are only two user accounts active. If other accounts are added, be sure to change the password to ensure the security of the system. See the User's Manual section **3.2.1 User Management** for details on how to add and edit user accounts.

Continued from page 5.

4. To adjust the time and date:

   Note: Changes to time and date settings may cause inconsistency or data loss in previously recorded material. Back up all data before making changes. For more information on how to back up data, please see Exporting Video on pg. 11 of this guide.

   a. Enter the system menu and select **System**.
   b. Select **Date/Time**.
   c. Select **Date** and adjust the values as needed. Repeat for **Time**.
   d. Select **Time Zone**. Adjust the time difference to match the UTC (Coordinated Universal Time) offset in your area. For example, Los Angeles is 8 hours behind UTC, so the UTC offset is -8:00.
   e. For other features such as Daylight Saving Time and Network Time Protocol, please see the User's Manual section **3.4 System Date / Time Setting.**

5. To adjust the system language:

   a. Enter the system menu and select **SYSTEM**.
   b. Select **Language**. As soon as a new language is selected, the language displayed on screen will change. There are 24 different language options.

Basic Network Setup:

1. Enter the system menu and select **SYSTEM**. Be sure the DVR is connected to a network via an Ethernet cable.

2. Select **Network Setup**.

   a. Select **LAN Select**. If the DVR connects to a local area network, choose **LAN** (default).
   b. If the DVR connects directly to the internet, choose **PPPoE**. PPPoE users must configure the following options: PPPoE Account, PPPoE Password, and PPPoE Max Idle.
   c. If a connection to a network is not desired, choose None. The DVR will still record data.
   d. If a connection to a network is desired, it may be necessary to adjust LAN settings via the LAN setup menu (Network Setup→LAN Setup). Contact your network administrator for details about your network.
   e. To connect to a network based on DHCP, set the DHCP to ON. The IP address, Netmask, Gateway, and DNS setting will be retrieved from network servers.
   f. For non-DHCP users, set DHCP to OFF. Enter an IP address, Netmask, Gateway, and DNS settings. This information may be obtained from the network service provider.

3. Press ENTER or left click to confirm your selections, or press ESC or right click to cancel.

# Connecting a PTZ (Pan / Tilt / Zoom) Camera

Note: For pin configurations, please see **Pin Connection for Alarm I/O & RS-485 and Audio In** on page 12 of this guide.

1. Make sure the RS-485 connector from the PTZ camera is configured correctly. See pg. 12.
2. Connect the PTZ camera's RS-485 cable to the DVR's Alarm I/O input.
3. Press MENU to access the OSD main menu and select **Camera Setup**.
   a. Select **Dome Protocol** to choose the corresponding protocol.
   b. Select **Dome ID** to choose an ID number. The ID number must match the ID address defined by the PTZ camera.
4. Select **SYSTEM** from the system menu, and then select **RS485 Setup** to configure the RS-485 parameters.
5. For instructions on how to control the PTZ camera's functions, please see the User's Manual section 4.5 **Dome Control**.

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Viewing:

The main screen shows live data from cameras connected to the DVR.

1. Display Modes – when viewing the main screen, scan through the modes by pressing the MODE button on the front panel/remote. Using the mouse, right click the main screen and choose **Mode**. See each mode description below for further instructions.
   a. Full screen – shows one channel. Access this view by pressing a channel button on the front panel/remote, or left clicking any channel image (left click to return to all-channel view.)
   b. Tile mode – Channels will display in the following modes:
      2x2, **3x3** (DR-108Q and DR-116Q only), **4x4** (DR-116Q only)
      i. Access this view by pressing the MODE Button on the front panel/remote, or right clicking the mouse and choosing **Mode**.
      ii. Tile mode will cycle through all channels in each mode before moving to the next mode. (For example, DR-116Q will cycle through channels as follows: 1~4, 5~8, 9~12, 13~16, 1~9, 10~16, 1~16).
   c. Sequence – DVR will automatically cycle through channels.
      i. Press the SEQ button on the front panel/remote. Using the mouse, right click the main screen and choose **Sequence**.
      ii. The DVR will scan through all channels using the current display mode. For example, in the Full Screen mode, the DVR will scan through each channel in full screen. In tile mode, the DVR will scan through channels depending on how many channels are displayed at a time. For example in 2x2 mode, the DVR will display 4 channels at a time.
2. Freeze – freezes images on the present screen. From the main screen, press FREEZE on the front panel/remote. Using the mouse, right click the main screen and choose **Freeze**.
3. Quick Zoom – zooms the screen 2x.
   a. When viewing the main screen, press ENTER on the front panel/remote. Press ENTER to zoom out.
   b. For Full Screen mode, present channel will zoom. For other modes, the last selected channel will zoom.
   c. Pan up/down/left/right using the front panel/remote.
4. Certain icons will appear on screen while in any display mode. Please refer to the following chart for descriptions.

Icon	Meaning	Icon	Meaning	Icon	Meaning
	Main monitor		Freeze / pause		Stamp A, Stamp B
	Call monitor		Dome control		Lock
	Monitor active / not active		Zoom		HDD usage
	Sequence		Playback speed / direction		Disk status
	Record		End of video		Guest
	Event record		Quick export		User authority level

Recording:

By default, the DVR will record any data received from cameras connected to it. The following provides instructions for making basic adjustments to the record settings. See the User's Manual section 3.5 **Record Schedule / Quality Settings** for more details.

1. Enter the system menu by pressing MENU on the front panel/remote or by right clicking the main screen and choosing **Menu**. Enter a username and password if necessary. User account must have sufficient system authority to adjust recording settings. See the User's Manual section **3.2.1 User Management** for details on how to edit user accounts.
2. Choose **REC**. The default setting is Preset→Best Quality.
3. The recording options are:

Preset Configuration	Recording Mode Options
Extended	720x480@30PPS (6KB/P), 720x240@60PPS (4KB/P), 360x240@120PPS (2KB/P)
Best Quality	720x480@30PPS (22KB/P), 720x240@60PPS (12KB/P), 360x240@120PPS (6KB/P)
Standard	720x480@30PPS (14KB/P), 720x240@60PPS (8KB/P), 360x240@120PPS (4KB/P)
128Kbps DSL	2KB/P
256Kbps DSL	3KB/P
512Kbps DSL	4KB/P
ezRecord	Activates ezRecord function and ezRecord menu (Record Setup option 5)
Event Only	Activates event-only recording. DVR will record only when an event is detected.

PPS: Pictures Per Second.   P: Picture

4. To configure recording on a per camera basis, set Preset Config to OFF. Each channel can be configured to record at a certain quality for certain time periods or events. For detailed information, please see the User's Manual section **3.5.4 Per Camera Configuration**.

Searching:

1. To search playback data, press the SEARCH button on the front panel or remote, or right click the main screen and choose **Search**.
2. There are three different search modes from which to choose:
   Search by Time
   - Select **From:** to start playing from the earliest recorded video.
   - At **Select**, choose a date and time from which to start playing video.
   - Select or click the play icon to being playback from the selected start point.
   Calendar Search
   - Select **Calendar Search** from the **Search** menu.
   - Choose the year and month you wish to view.
   - Choose a day on the calendar and press ENTER. Days shown in light gray on the calendar are those for which recorded data is available.
   - Press the right/left keys to choose a playback start point or choose **Select** to manually choose a start time. Times where data was recorded will show in yellow in the Search by Time section.
   - Select or click the play icon to begin playback from a selected start point.
   Search by Event
   - Select the channel or channels you wish to view.
   - Events from the selected channel or channels will be listed.
   - Select an event record.
     Note: The event list will only display 1,024 events. Events are added on a first-in first-out basis. For more information, please refer to the User's Manual section **3.6 Event Settings.**
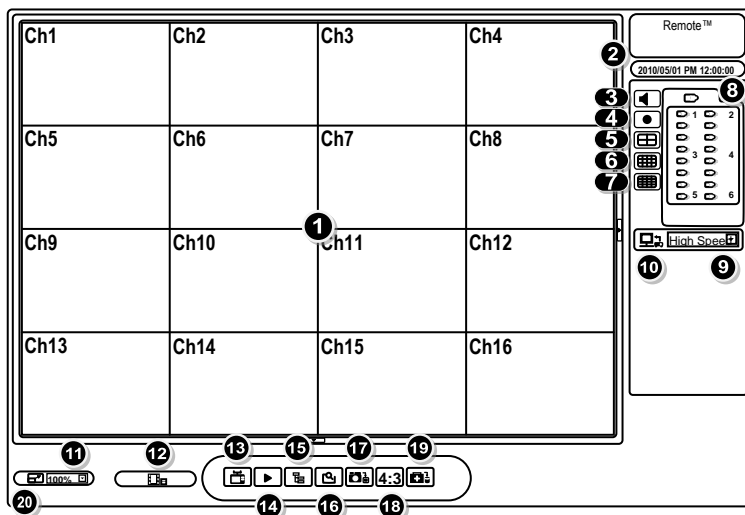
Remote Viewing:

The DVR provides full access to live and recorded data, DVR settings, and export features via the Windows Internet Explorer Internet browser.

1. Ensure the DVR is connected to the local area network. Note the DVR's IP address via System Menu→System Setup→LAN Setup→IP. If using other network options, see the User's Manual section **5. Remote Monitoring Software**, or consult your network's administrator.
2. On a computer with access to the local area network, open Internet Explorer and enter the DVR IP address in the following format (where w.x.y.z is the IP address as noted in step 1):

<div align="center">http://w.x.y.z/</div>

3. The browser will load the remote viewing software and prompt for a username and password.
4. The first time the software loads, two ActiveX controls will be installed.
5. Usernames and passwords are the same as those for accessing the DVR on screen display.
   Note: Your browser may require additional setup. If the remote viewing software does not load, please consult the User's Manual section **5. Remote Monitoring Software**.
6. The remote playback interface is as shown below:

	Remote Viewing Software Interface Descriptions		
1	Channel images with channel numbers	11	Screen size
2	Current date and time	12	Download DVR Player software
3	Sound ON/OFF	13	Live View (show live video streams)
4	Quick Record (press once to assign file and start recording, press again to stop recording)	14	Playback (opens playback menu)
5	4-channel view	15	Settings (opens settings menu)
6	9-channel view	16	Search by event
7	16-channel view	17	Snapshot (captures current view)
8	Channel selection (shows fullscreen view)	18	Show 4:3 aspect ratio
9	Bandwidth selection	19	Device status
10	Dual streaming	20	Full screen view

Mobile Viewing:

If the DVR is connected to the Internet, mobile device with Java-capable Internet browsers can be used to view live data.

1. In the mobile device web browser, enter the IP address of the DVR. Consult your network administrator for further information.
2. A window will display requesting a username and password. These are the same as those used to access the DVR via other means.
3. Once connected, a live stream from Channel 1 will be displayed along with the date and time.
4. Use the drop-down menu to select streams from other channels.
5. Be sure to log out when finished viewing to allow the next user to log in.
6. For more detailed instructions, see User's Manual section **6. iPhone and Smartphone Monitoring**.

Playback:

1. Playback is stopped and started by pressing the PLAY/STOP button on the front panel or remote, or by right clicking the main screen and choosing **Play/Stop**.
2. Playback will start from wherever the previously displayed recording was stopped.
3. Use MODE, PLAYSTOP, FREEZE, and ZOOM buttons to adjust playback. Using the mouse, move the cursor to the right side of the screen and use the Function buttons to adjust playback.
4. When playback is paused, pressing the right/left buttons will advance/reverse the video by one frame. Using the mouse, scrolling up or down will advance/reverse the video, respectively.
5. Change the playback speed using the right/left arrow buttons or scroll up and down with a mouse. Playback can be sped up or slowed down by up to 32x its original speed. Current playback speed is displayed in the lower left-hand corner of the screen.
6. To return to live view, press **Live**.

Note: The system menu cannot be accessed while in Play or Freeze mode. First return to live view to access the system menu.

Exporting Video:

The DR-1 series offers a fast, simple, and convenient export function.

1. Connect a USB flash drive or other storage device via the USB port on the front of the DVR.
2. Play back the desired recorded data. Mark the export start point by pressing the COPY button on the front panel or remote, or right click the main screen and choosing **Copy**.
3. Continue playback until you reach the desired end point. If needed, increase playback speed as explained in **Playback** on page 11 of this guide. Mark the export end point by pressing the COPY button on the front panel or remote, or right click the main screen and choosing **Copy**.
4. The DVR will prompt the user to confirm the data for export. Export may take up to an hour.
5. Data can be exported in the .drv or .avi format and can be viewed using the built-in remote viewing software. Please refer to the User's Manual.

Note: A copy of the video player software will be added to the export device.

Shutting Down the DVR:

1. Enter the system menu by pressing MENU on the front panel/remote or right clicking the main screen and choosing **Menu**.
2. Enter the SHUTDOWN menu and choose **Power Off**.

Pin Connection for Alarm I/O & RS-485, and Audio In:

Alarm I/O & RS-485:

<u>DR-104Q:</u>

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out N.O.	8	Audio In 1	15	RS-485 D-	22	Reserved
2	Alarm out COM	9	Audio In 3	16	Alarm In 2	23	Reserved
3	RS-485 D+	10	Reserved	17	Alarm In 4	24	GND
4	Alarm In 1	11	Reserved	18	Reserved	25	GND
5	Alarm In 3	12	GND	19	Reserved		
6	Reserved	13	GND	20	Audio In 2		
7	Reserved	14	Alarm Out N.C.	21	Audio In 4		

<u>DR-108Q:</u>

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out N.O.	8	Audio In 1	15	RS-485 D-	22	Audio In 6
2	Alarm out COM	9	Audio In 3	16	Alarm In 2	23	Audio In 8
3	RS-485 D+	10	Audio In 5	17	Alarm In 4	24	GND
4	Alarm In 1	11	Audio In 7	18	Alarm In 6	25	GND
5	Alarm In 3	12	GND	19	Alarm In 8		
6	Alarm In 5	13	GND	20	Audio In 2		
7	Alarm In 7	14	Alarm Out N.C.	21	Audio In 4		

<u>DR-116Q:</u>

Alarm I/O & RS-485

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out N.O.	8	Alarm In 3	15	Reserved	22	Alarm In 13
2	Alarm Out COM	9	Alarm In 4	16	Reserved	23	Alarm In 14
3	RS-485 D+	10	Alarm In 5	17	Reserved	24	Alarm In 15
4	RS-485 D-	11	Audio In 6	18	Alarm In 9	25	Alarm In 16
5	Reserved	12	Alarm In 7	19	Alarm In 10		
6	Alarm In 1	13	Alarm In 8	20	Alarm In 11		
7	Alarm In 2	14	Alarm Out N.C.	21	Alarm In 12		

Audio

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio In 1	8	Audio In 15	15	Audio In 4	22	GND
2	Audio In 3	9	GND	16	Audio In 6	23	GND
3	Audio In 5	10	GND	17	Audio In 8	24	GND
4	Audio In 7	11	GND	18	Audio In 10	25	Reserved
5	Audio In 9	12	GND	19	Audio In 12		
6	Audio In 11	13	Reserved	20	Audio In 14		
7	Audio In 13	14	Audio In 2	21	Audio In 16		

Optional Accessories for the DR-1 Series:

DRA-RMQ	Spare IR remote
DRA-P4Q	4-Channel Alarm/ Audio Pigtail Input
DRA-P8Q	8-Channel Alarm/ Audio Input Pigtail
DRA-P16AQ	16-Channel Alarm Input Pigtail
DRA-P16SQ	16-Channel Audio Input Pigtail

Also Available from SECO-LARM:

EVT-PB1Q
Passive Video Balun
(Up to 2,000ft range)

VC-1BAQ
BNC to VGA Converter

MVD-V1201-1Q
VGA Distributor, 1-in 2-Out
(Up to 984ft range)

MVE-AH020Q
HDMI Extender
(Up to 230ft range)

IMPORTANT: Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.